**INTERACTIVE
SERVICES
ASSOCIATION**

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THIRD ANNUAL
ONLINE CONSUMER SURVEY
Spring 1994

A MEMBERS-ONLY REPORT
May 1995

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EXECUTIVE SUMMARY

Major findings of the 1994 Interactive Services Association users survey:

• *The consumer audience for online services is broadening.* The income levels of online users, as well as their age and usage patterns, are becoming more diverse, reflecting a growing acceptance of online services by consumers outside the traditional high-tech early adopters.

• Given this trend, *it appears plausible that by the end of 1995, for the first time, consumers who have been active for one year or less will make up the majority of all consumer online users*—a sea change in member composition in just three years.

• *Online subscribers who also use the Internet represent a different user profile.* Internet traffic is driven by users who are younger than traditional online subscribers. Forty-seven per cent of commercial services/Internet users are under 35, compared to just 36 per cent of non-Internet users. Conversely, 64 per cent of commercial service subscribers who were not Internet users are over 35, versus 53 per cent of Internet users.

•*Further distinctions emerge around online activities that could be considered more "mass market" and less technology-oriented.* The table shows how online users reported their frequency of use for some of these activities. Note that a higher percentage of non-Internet users report that these applications are the ones they use the most.

	Obtain Product Info/Make Purchase	Educational Services for Children	Play Games	Obtain Financial Information
Consumer Online and Internet User	7 per cent	13 per cent	10 per cent	22 per cent
Commercial Online and Non-Internet User	13 per cent	15 per cent	14 per cent	27 per cent

• *The income profile of commercial online subscribers who use the Internet is not significantly different from other commercial online users.* The data suggest that Internet usage among commercial online subscribers has grown to such an extent that those users now represent a broad sample of the overall commercial online community.

SURVEY METHODOLOGY

This report details the findings of the Interactive Services Association's third annual survey of online service users. The survey was fielded during the spring of 1994 (see Appendix for full version of the survey). The approach to the 1994 survey varied from previous methodologies, in that the survey was actually posted online by four of the major national consumer online services. These four services represented 85 per cent of the total consumer online market in the spring of 1994. Users were self-selected, in that they participated in the survey of their own volition. These are the service providers whose data appears in this report:

- America Online
- CompuServe (including ZiffNet)
- GEnie
- Prodigy

In total, the survey received more than 12,000 completed responses. As the volume of response varied from vendor to vendor, data were weighted to reflect the subscriber market share associated with each of the service providers at the time of the survey to give a more accurate national picture. The ISA previously published reports in 1993 and 1992, based on online user surveys that were conducted from December 1992 to January 1993 and in May 1991, respectively. Where appropriate, data from those surveys are compared with findings from the current survey in charts and in the survey summary found in the Appendix. The latest survey, however, was the first to include all of the top three consumer online services in the United States.

The most recent survey also gave new emphasis to emerging technologies. Questions were added about Internet usage, as well as new platforms for interactive services, such as interactive television, Personal Digital Assistants (PDAs) and screen telephones.

The methodology of the latest survey permitted further analysis of certain demographic segments of the online user market. Because of the intense interest today in the Internet, the ISA devoted special attention to the differences, if any, that were found between commercial online users who also used the Internet and those who did not. Those findings are summarized in the report.

LINK Resources compiled the responses from the various services, performed the calculations necessary to analyze the data and contributed to this summary report.

FINDINGS

Demographics

The 1994 survey shows the consumer online market beginning to evolve away from its traditional concentration of highly technical, upscale male users. As can be seen in the figures below, newer online users are broadening the income distribution and educational background of the population of online subscribers.

The ISA's 1994 survey was the first of the association's three surveys to collect detailed demographic information about respondents. Here are the findings:

Education

In keeping with the established consumer online profile, the educational achievement of current online users is quite high. As shown in Figure 1, more than 60 per cent of respondents live in a household where the primary wage earner has a college degree, including 12 per cent with a post-graduate degree. This has always been true of the commercial online market; however, this year's data also indicate that the diversity of newer users (online for one year or less) is expanding the variety of educational experience among online users. As discussed below, income levels and age levels are broadening to reflect more of a mass market profile in the online industry. While this phenomenon is in its early stages, it is apparent that the newer members of the online community bring a different set of demographic characteristics with them.

Age

As shown in Figure 2, 58 per cent of current users are over 35, with 44 per cent between the ages of 35 and 49, and 14 per cent above 50. Thirty-six per cent of respondents were between the ages of 19 and 34, and 5 per cent were 18 or under. While it appears that newer online users are younger than existing subscribers, it will be some years before this profile is likely to be altered in a significant way, due to the large majority of users who are in the older age brackets.

Income

Figure 3 provides a snapshot of current member income levels. Roughly speaking, a division can be seen around the $50,000-a-year income level. About 54 per cent of survey respondents reported household incomes below $50,000, with about 36 per cent showing incomes above that level (12 per cent did not respond). This apportioning is much higher than the national distribution of income at these levels, but the

Figure 1

**Highest Education Level
of the Primary Wage Earner/Income Provider of
the Household**

Figure 2

Age Distribution of Consumer Online Users, 1994

Figure 3

Household's Overall Annual Income (before taxes)

Income Range	Percentage
< $35K	26%
$35K-$50K	27%
$50K-$75K	18%
> $75K	18%
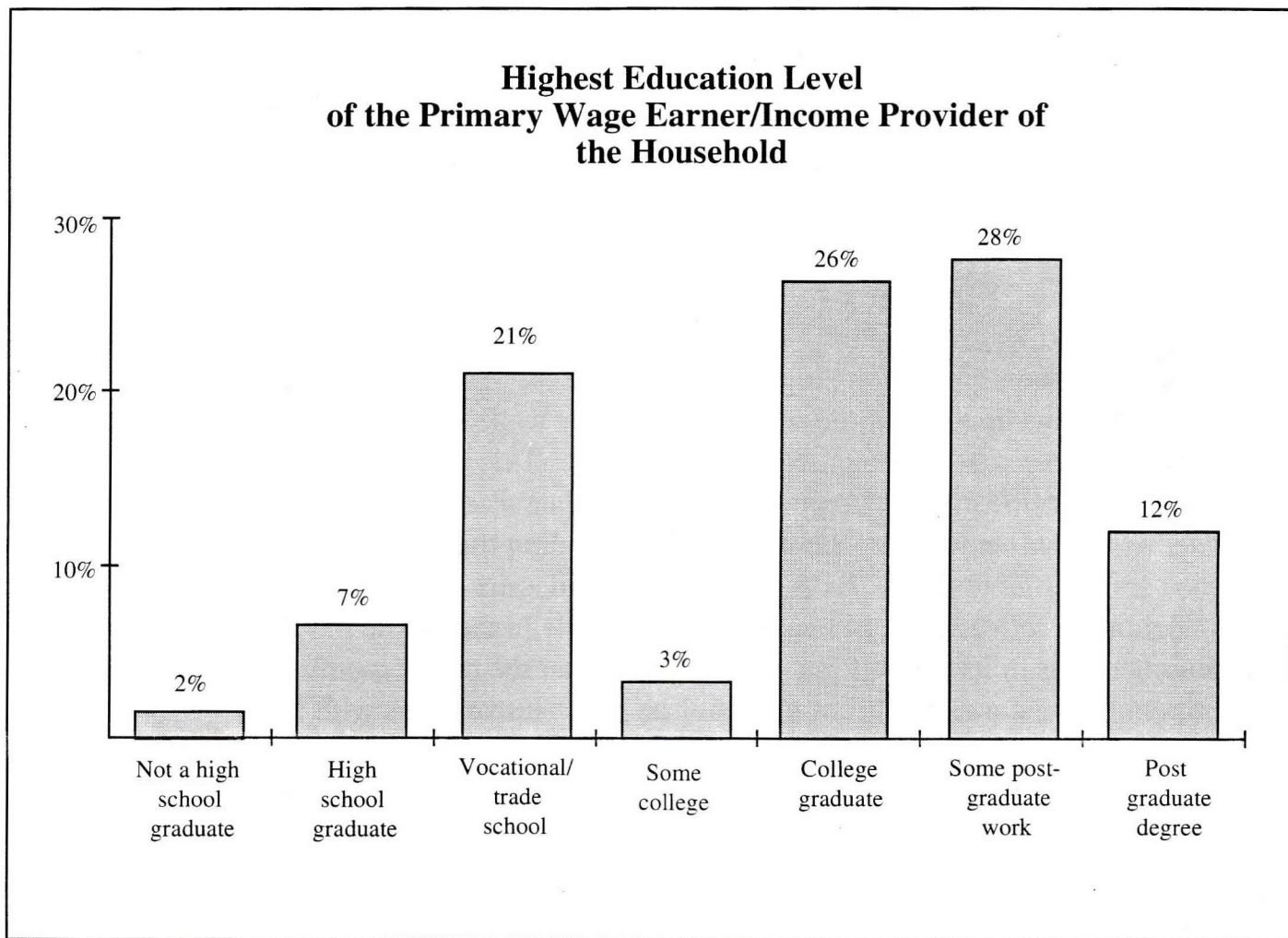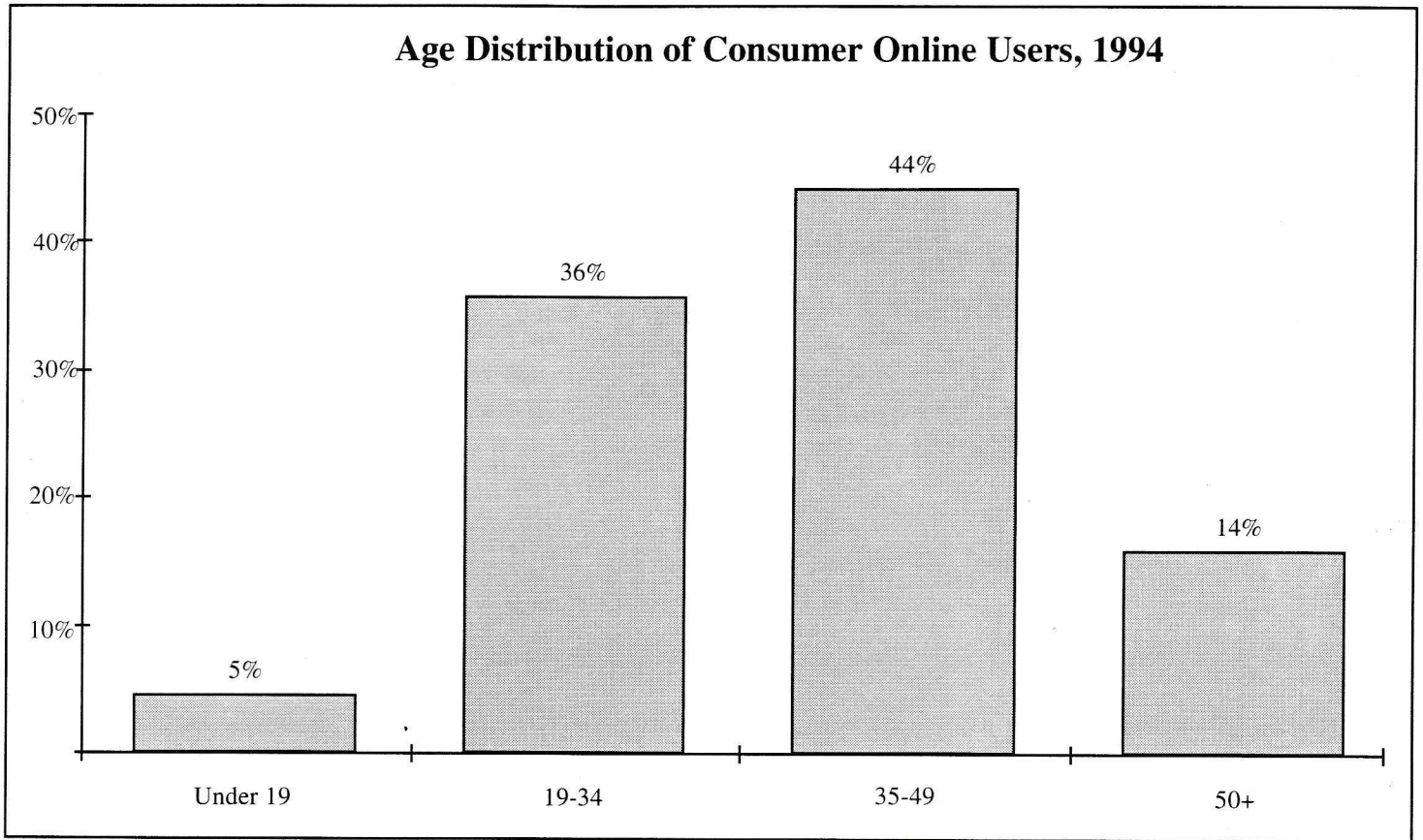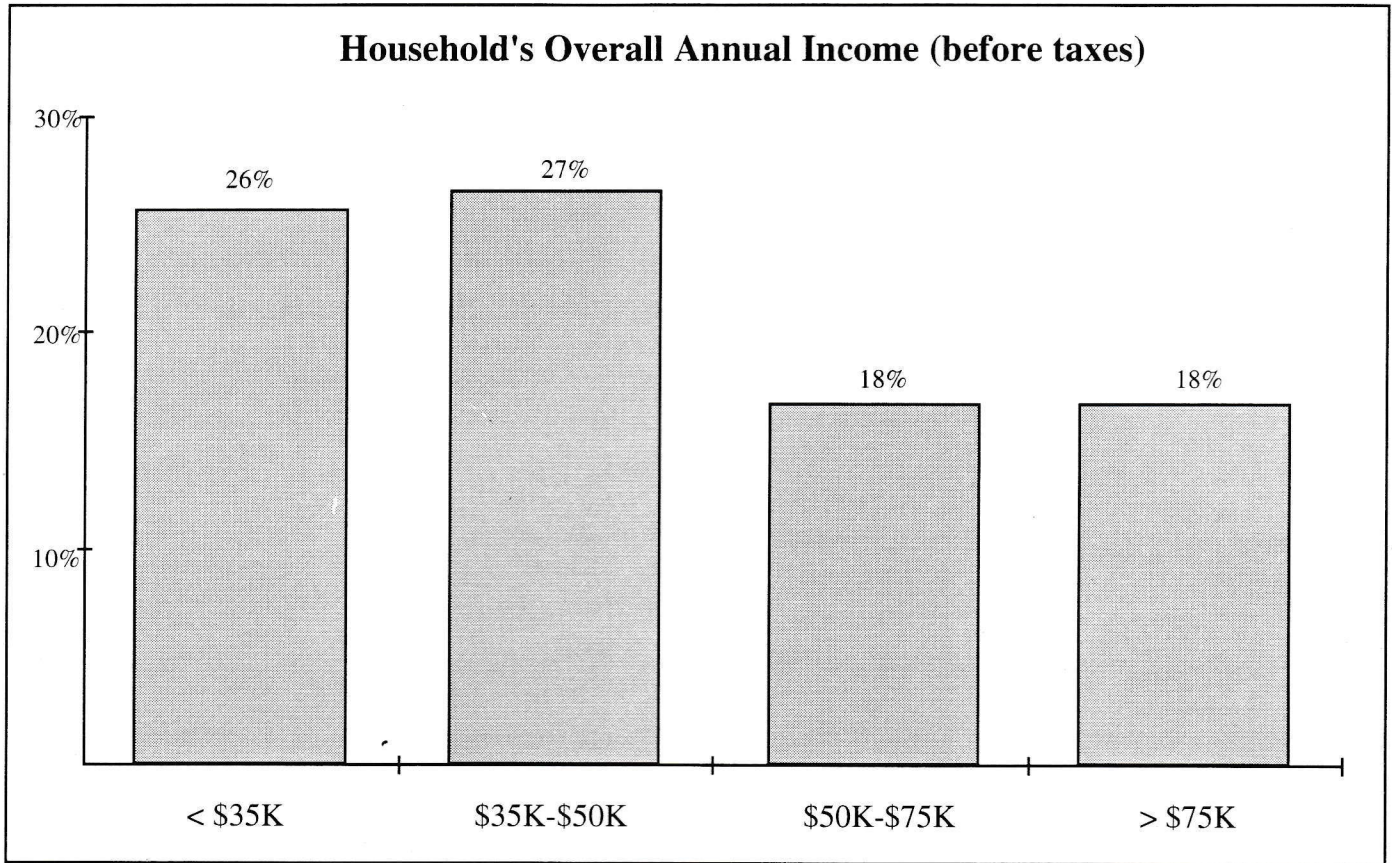
direction of this distribution, and perhaps one of the more vivid examples of the difference between newer subscribers and existing ones, can be seen in Figure 4, which shows income distribution broken down by number of years subscribing to an online service.

As can be seen, 61 per cent of new subscribers have incomes below $50,000, compared with 49 per cent of one- to three-year subscribers and 43 per cent of consumers who have subscribed for four or more years. Conversely, just 29 per cent of these newer users have incomes above $50,000, while 39 per cent of those online for one to three years, and 44 per cent of those online four or more years, have incomes above $50,000.

The upshot of this comparison is that more recent arrivals to the online market have dramatically lower incomes than their more established counterparts. This should not be taken as bad news for the industry. In a market which has been as narrowly defined as consumer online, the arrival of a broader representation of consumers represents some of the first hard evidence that the industry really is becoming a mainstream medium.

Gender and Household Usage

Respondents to the ISA's survey were, like the overall online user population, predominantly male, by a proportion of 83 per cent to 17 per cent. And 77.5 per cent said the male household head was the heaviest user. (See Figure 5.)

However, there was some evidence that the online population is broadening. Forty-one per cent of respondents said other family members used online services regularly. Among that group, 62 per cent reported that the female household head was a regular user.

Of particular note is the number of children who are joining family members online. In the 1994 survey, 39 per cent of respondents with family members online said that children over 12 use online services, compared with 19 per cent in 1993 and 27 per cent in 1991. Nineteen per cent said children 12 or under in the family used online services, a figure that compared with 21 per cent in 1993 and 10 per cent in 1991.

Figure 4

Length of Online Service Usage (by level of household income)

Legend: □ < 1 Year □ 1-3 Years ■ 4-6 Years

Income	< 1 Year	1-3 Years	4-6 Years
< $35,000	31%	24%	19%
$35K-$50K	30%	25%	24%
$50K-$75K	16%	20%	20%
> $75K	13%	19%	24%

Figure 5

Heaviest User of Online Services in Multi-User Households

Children over 12
8%

Children 12 or under
.3%

Female head of
household
13%

Male head of household
78%
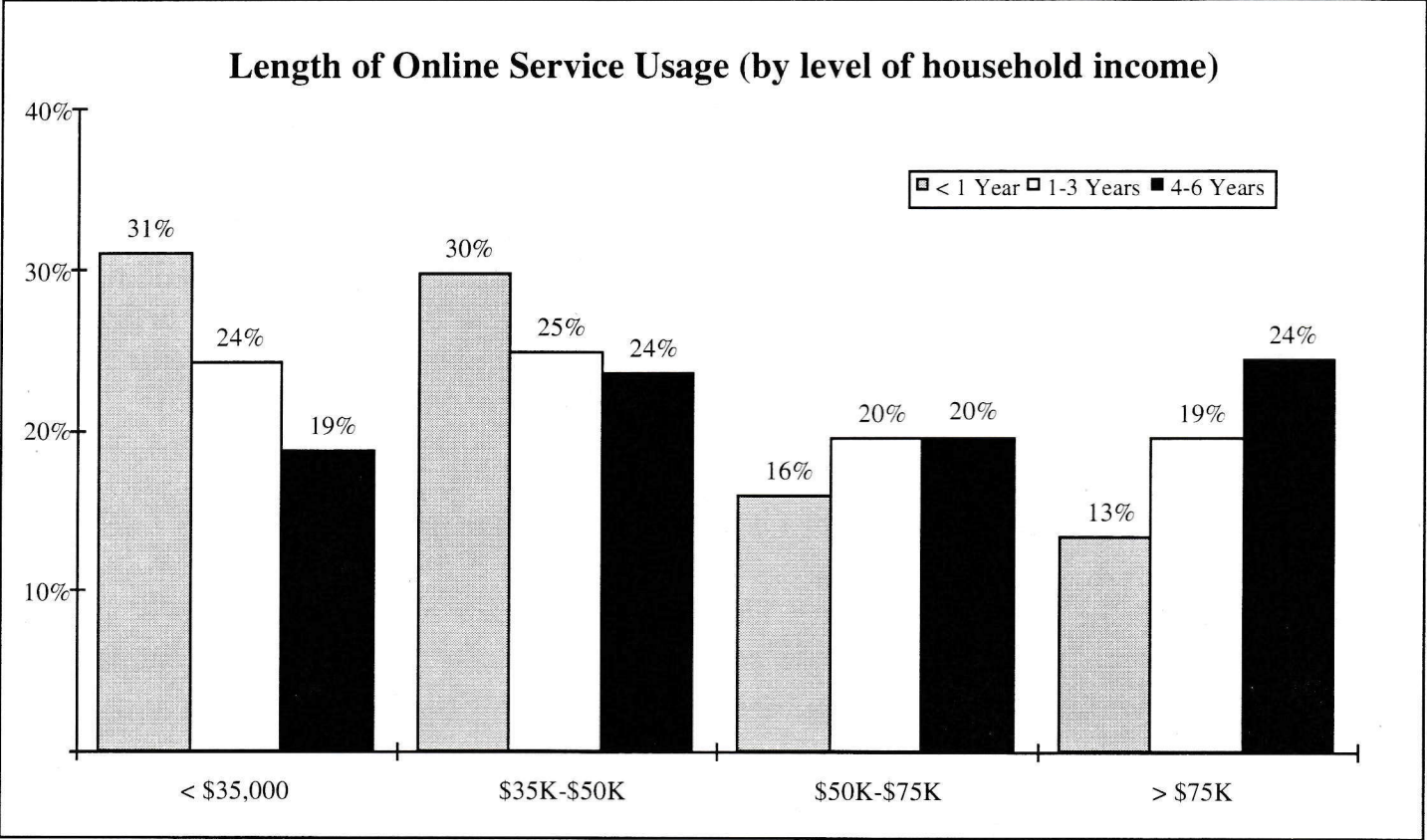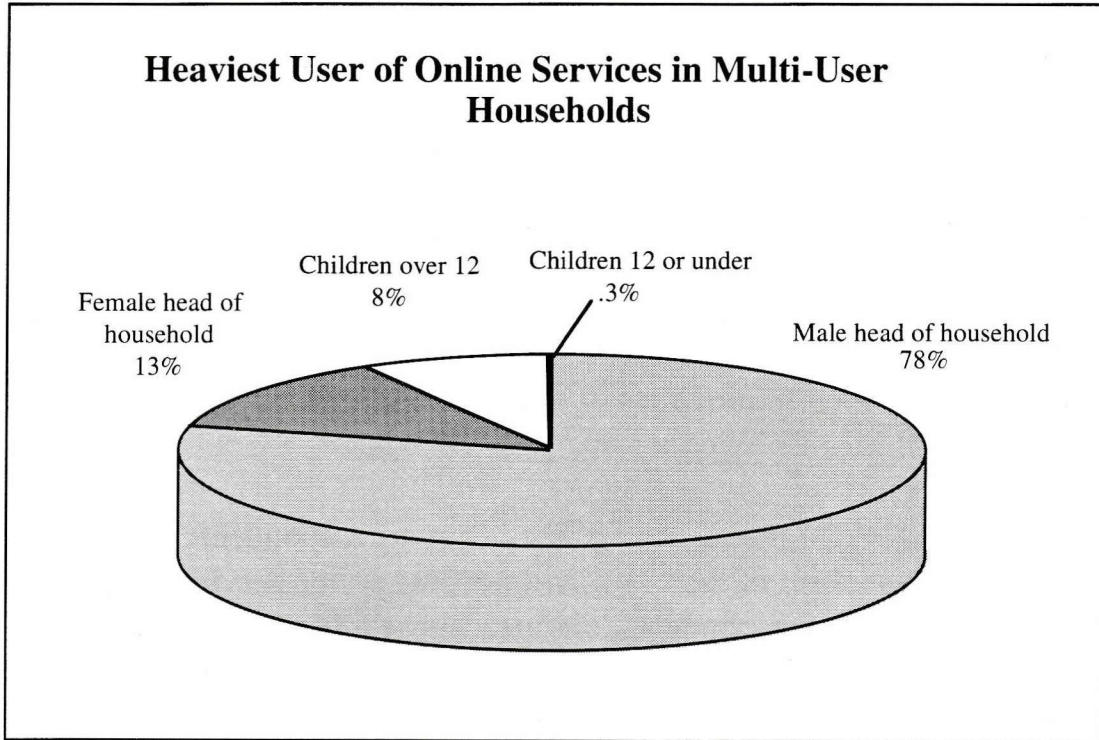
Membership and Usage Patterns

The rapid growth of online services in the past two years has resulted in a subscriber base with a larger proportion of relatively new users. When asked how long they had subscribed to online services, nearly half (42 per cent) of respondents to the ISA's survey said they had been active one year or less. (Figure 6) Twenty-five per cent said they had been subscribing to online services for four or more years.

Figure 7 shows how the market is shifting from a historic perspective. In 1991, just 29 per cent of those who responded to the ISA survey reported that they had been online one year or less. In 1993, that figure rose to 37 per cent, and then, as noted, to 42 per cent in the latest survey. Given this trend, it appears plausible that in 1995—for the first time—members who have been active for less than one year will make up the majority of all consumer online users—a sea change in the user population over the course of just three years.

Frequency of Access

As shown in the next chart (Figure 8), a majority of survey respondents (54 per cent) said that they or other members of their household access online services at least once a day. Another 32 per cent of respondents said their household accessed online services three or four times a week, and 10 per cent reported once-a-week access. Only 4 per cent reported that they accessed online services less frequently than once or twice a month.

Previous ISA surveys asked survey respondents about their own usage rather than their household's so a direct comparison with earlier surveys is not possible. Nevertheless, if 90 per cent of online households are signing on at least three or four times a week, it suggests that online usage is becoming a regular activity in the lives of at least one, and possibly more, family members.

Several factors may have contributed to this. In the past, online operators have seen a pattern in which newer users, intrigued by the novelty of going online, use their services frequently at first, before settling into a longer-term pattern of less frequent usage. The big crop of newer users that are now using online services could help tilt the scales that way. On the other hand, the continual improvements that the online services have made over the course of time are undoubtedly providing more seasoned users with a richer mix of services, and possibly encouraging them to sign on more frequently. Also, the increasing number of people who are interconnected through e-mail (particularly through the Internet) may prompt more long-term users to go online more often to "check the mail."

Figure 6

Length of Time Using Online Services

4 or more years
25%

Less than 1 year
42%

1-3 years
33%

Figure 7

Evolution of Online Membership Composition, 1991-1994

Legend: ☐ 1991 ☐ 1993 ■ 1994

Less than one year: 29%, 37%, 42%
1 to 3 years: 37%, 31%, 33%
4 or more years: 34%, 33%, 25%

Figure 8

Frequency of Access to Online Services by Household Member

54%				
	32%			
		10%		
			3%	1%
At least 1x per day	Very frequently (3x or 4x/ week)	Somewhat frequently (1x/ week)	Occasionally (1x or 2x/ month)	Less frequently than 1x per month

Subscribership

The next sequence, Figures 9, 10, and 11, examine the incidence of multiple service usage among online consumers. As shown in Figure 9, about half (51 per cent) of survey respondents said they subscribed to one service, and about half (49 per cent) to multiple accounts. The main reason for this polarity is probably the great influx of new users who entered the online market in 1994. These subscribers probably start with one service, which they will explore for some time—probably for their initial year of subscribership. (Anecdotal evidence collected by LINK Resources suggests that within six months to one year, subscribers either disconnect from the online world—perhaps to switch to another service later—or become so enamored of it that they sign up for additional services.)

This theory holds up when findings from the ISA's earlier surveys are reviewed. In the 1991 survey, before the large influx of new users, only 31 per cent of respondents said they subscribed to one online service and in the 1993 report, 38 per cent.

Figure 10 explores some of the reasons respondents cited for subscribing to services other than the one they were using when they took the survey. As shown, the most significant motivation cited was that some features were "cheaper" on other services. This would suggest that consumers have been willing to subscribe to an additional service simply to get access to a critical feature, if the ongoing price of accessing and using this feature was better than that of the initial service. Thirty-six per cent said they could not find all the features they wanted on one service, while 40 per cent said some services were "easier, or more fun to use" than others.

Interestingly, responses to that question have changed dramatically from earlier ISA surveys (Figure 11). In the two previous surveys, more than 60 per cent of respondents said they had multiple subscriptions because "no one service provides all the features I want to see." That trend suggests that as the major online services have developed their content over the years, more and more consumers say they can find the information or features they are looking for within one service. What can drive them to another service, the survey suggests, is a more attractive pricing model or a better user interface.

Figure 12 shows the incidence of multiple subscriptions among those subscribers who also use the Internet. (Findings related to Internet usage are discussed in more detail below.) In this graphic, a clear distinction emerges: 60 per cent of consumers who report that they do not use the Internet subscribe to only one online service, while 60 per cent of those who do use the Internet have multiple subscriptions to commercial online services.

This distinction will probably disappear as the major national services incorporate World Wide Web browsers this year, and more and more of their subscribers take advantage of the services' expanded Internet connectivity.

Figure 10

Reasons for Using More Than One Online Service

Figure 11

Reasons for Using More than One Online Service (1991-1994)

Figure 12

Online Services Subscriptions, by Internet vs. non-Internet Users

Legend:
- ▨ Yes, use Internet
- ☐ No, don't use Internet

Data:
- 1: 40% (Yes), 60% (No)
- 2: 32% (Yes), 27% (No)
- 3: 16% (Yes), 8% (No)
- 4: 5% (Yes), 2% (No)
- 5+: 6% (Yes), 2% (No)

Number of Online Services Subscribed to

Applications

Figures 13 and 14 compare which applications drove respondents to sign up for online services with the applications they report actually using. As the figures show, there are few meaningful differences between the applications that attract users to the online world, and those that they say they are actually using. Software downloading, communicating with people with similar interests, obtaining general news, messaging and getting online help for using hardware and software were the most important.

The most significant disparity between the two listings centers around obtaining news and financial information. While 39 per cent of respondents reported that "Obtaining current general news" held at least some importance in their decision to go online, 46 per cent said it was one of the three applications they used the most. Similarly, "Obtaining financial information (managing investments)" was cited as a decision factor by 21 per cent of respondents, but 25 per cent said they used that feature frequently.

The top five applications have retained their ranking since the ISA began conducting its surveys. However, downloading software, which was cited by 80 per cent of respondents in 1991, was cited by only 45 per cent in 1994. Similarly, getting help on hardware and software, which was chosen by 68 per cent of respondents in 1991, was chosen by only 38 per cent in 1994. This, too, may suggest that the community of online users is losing some of its early focus on technology-based applications.

Business Versus Personal Usage

In the last ISA survey, respondents were asked a series of questions designed to measure whether their usage was related to business or personal interests. Last time, the scales tipped to the personal side and in the current survey, they tipped that way even more. Seventy-three per cent reported that more than half of their usage of commercial online services was personal, compared to 10 per cent with more than half of their usage devoted to business. (See Figure 15.) (Those numbers compared with a split of 65 per cent personal and 11 per cent business in the last survey.) Fifteen per cent reported that their usage was evenly split between their two worlds, compared with 16 per cent in the last survey. The question in the 1994 survey included more specific answers than before, and this time 42 per cent reported that all of their usage was personal while only 2 per cent of users said that all of their usage was business-related.

Figure 13

Online Applications Most Important in the Decision to Begin Using an Online Service
(Multiple responses allowed)

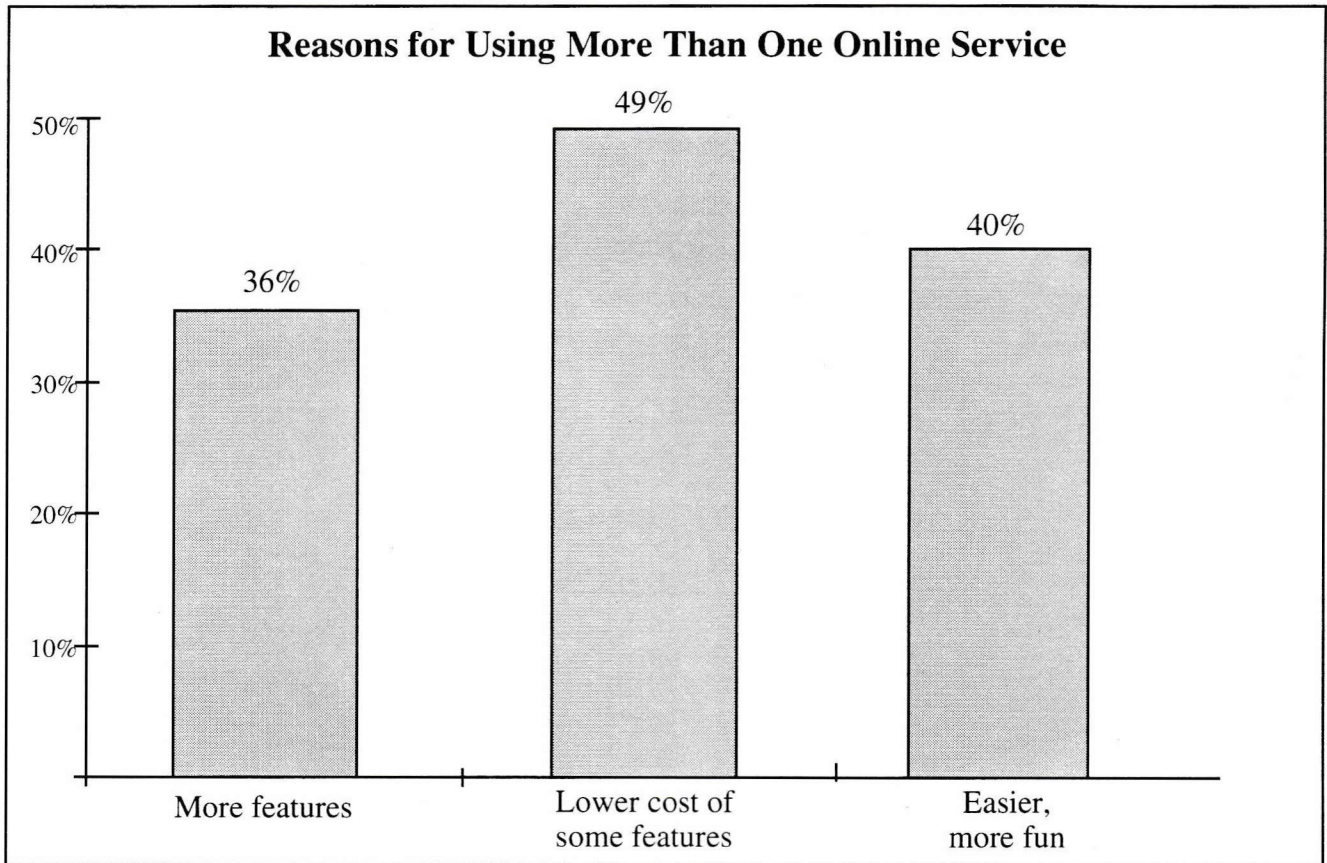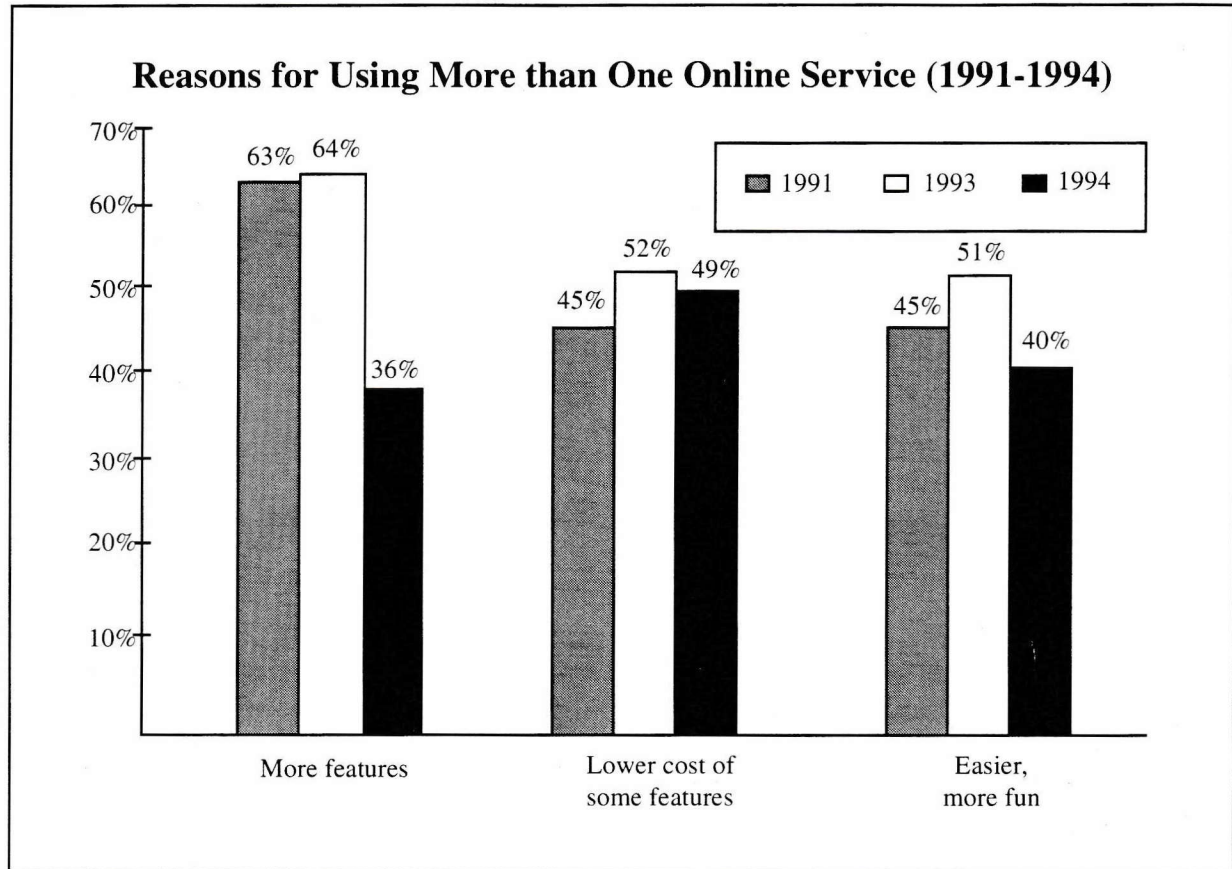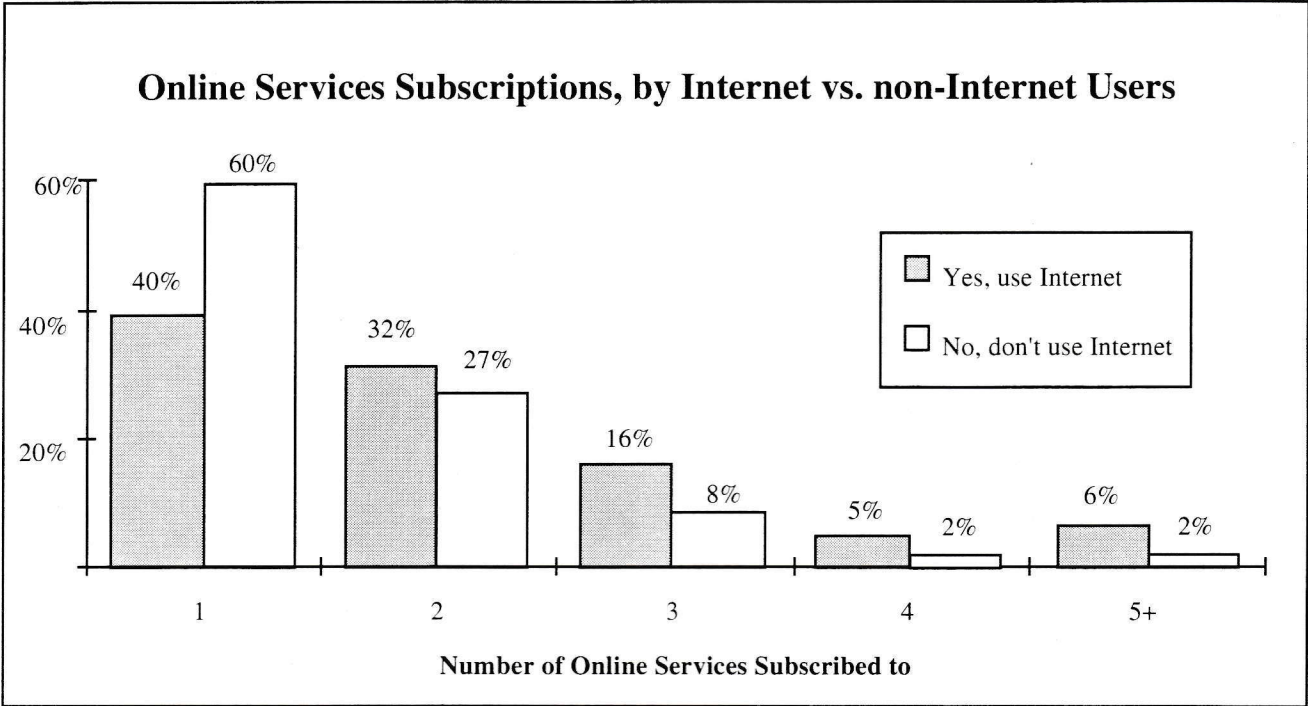| Application	Percentage
Paying bills/transfer funds	3%
Obtain product info or purchase product	10%
Travel info/reservations	8%
Send/receive messages	38%
Downloading software	45%
Communicating w/others who share interests	44%
Educational services for children	18%
Obtaining current news	39%
Playing games	12%
Getting help (product support)	36%
Obtaining financial info	21%

Applications

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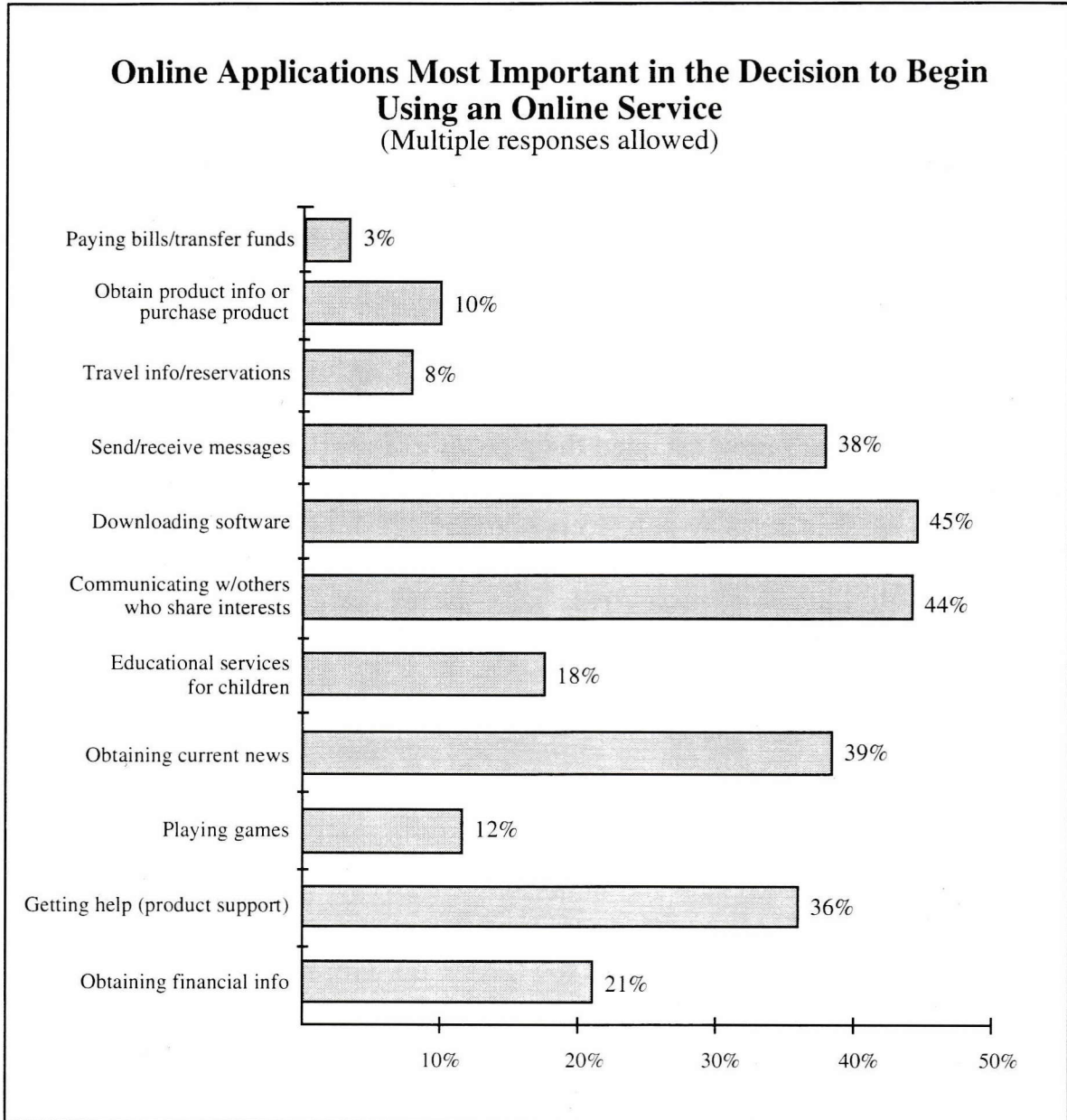
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Figure 14

Online Applications Used the Most by Commercial Service Subscribers

(Multiple responses allowed)

Application	Percentage
Paying bills/transfer funds	3%
Obtain product info or purchase product	10%
Travel info/reservations	8%
Send/receive messages	39%
Downloading software	45%
Communicating w/others who share interests	44%
Educational services for children	14%
Obtaining current news	46%
Playing games	12%
Getting help (product support)	38%
Obtaining financial info	25%

10% 20% 30% 40% 50%

Figure 15

Online Services: Business Usage Versus Personal Usage

Totally Personal
42%

Equally Divided
15%

Totally Business
2%

Don't Know
1%

More Than Half Business
8%

More Than Half Personal
31%

When asked who was footing the bill, 89 per cent said they paid their own online bill, 4 per cent said their employer paid and 6 per cent said it was split between the two. (Figure 16) In the last survey, 86 per cent reported they paid their fees themselves, while 5 per cent said their company paid and 8 per cent said the costs were split. Fifty-one per cent of those whose companies contributed said they worked for a company with more than 50 employees; 29 per cent worked for a company with fewer than 50 workers, and 21 per cent were self-employed.

Bulletin Boards

The response to the survey's questions about usage of Bulletin Board Services (BBS) reinforces the notion of a market undergoing change. Sixty-seven per cent of respondents to the 1994 survey said they used a BBS, compared with 66 per cent in 1993. But the reasons cited for using BBSes have changed dramatically.

In the most recent survey, the availability of shareware and freeware was cited by 64 per cent of respondents, compared with only 37 per cent in 1993. (Figure 17) That year, 41 per cent said they used bulletin boards "because they are free," the most important reason cited. But in the 1994 survey, that reason was mentioned by only 28 per cent. Communicating with other board users (56 per cent) was also reported as a major driver in the 1994 data, up from 34 per cent in 1993. Finally, the number reporting that the bulletin board was provided by their employer or covered their work declined, from 21 per cent in 1993 to 16 per cent in 1994. These data suggest that newer consumers may be more accepting of BBS charges.

Attitudes Toward Online Services: Pricing and Ease of Use

Figure 18 shows how much survey respondents reported spending each month on online services. (Note that the survey was conducted before most of these services instituted a round of price cuts, both for monthly subscription fees and hourly usage charges, in late 1994 and early 1995.) The largest segment of respondents—42 per cent—reported that they paid between $11 and $25 a month on online services. Another 26 per cent said they paid between $26 and $50 a month. Twelve per cent said they paid between $51 and $100 a month, 5 per cent said their expenses ran from $101 to $200 a month, and 2 per cent of users reported that they spent more than $200 a month. At the other end of the scale, 9 per cent said they paid less than $10 a month and 2 per cent of survey respondents said they paid nothing. Another 3 per cent said they didn't know what their charges were.

Pricing—a hot issue in the qualitative comments in the previous surveys—remained a concern. As demonstrated in Figure 19, 69 per cent of respondents said they felt online services were "expensive" or "very expensive." Another 22 per cent said they were "priced correctly." Three per cent said they were "inexpensive," and 6 per cent said they had no opinion. Again, most of the services that participated in the survey have reduced their hourly access fees and/or basic subscription fees since the survey was conducted.

Figure 16

Who Pays for Online Usage

Divided Between User and
Employer
6%

Employer Pays
4%

Don't Know
1%

User Pays
89%
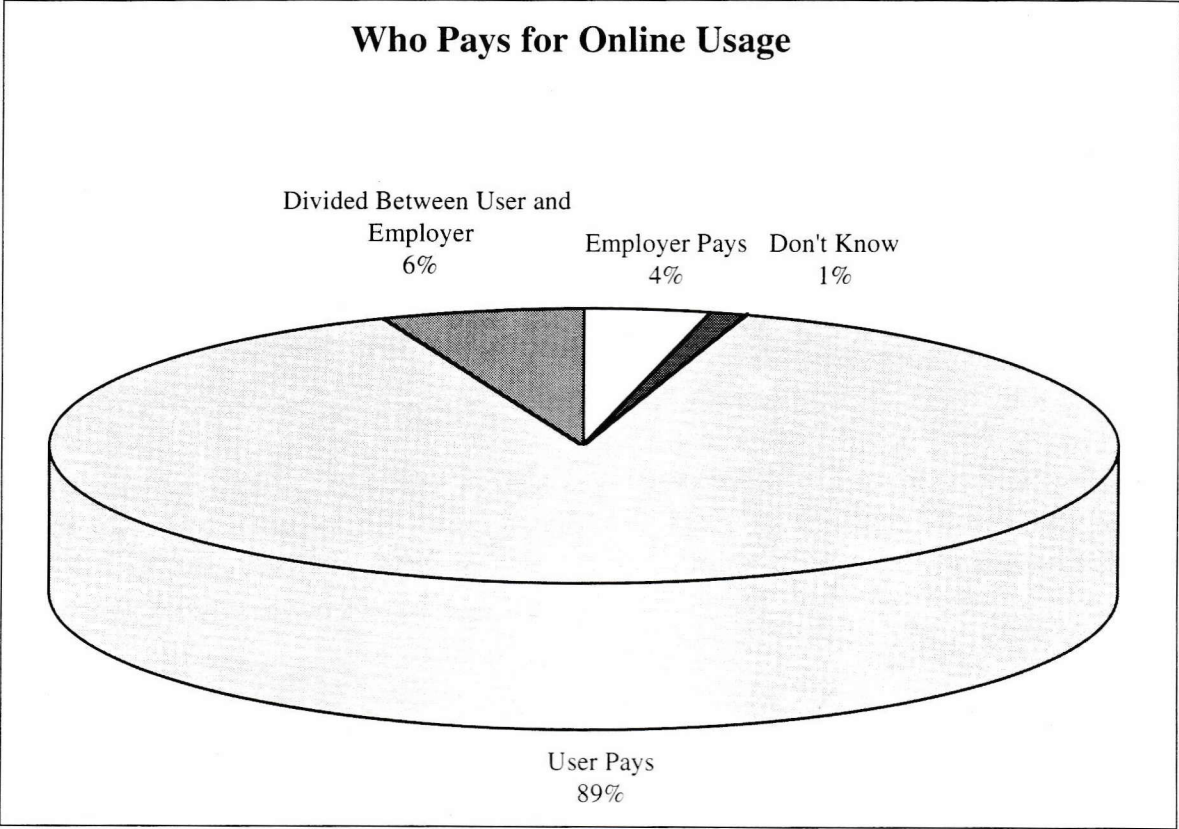
Figure 18

Monthly Household Expenditures for Online Services

$51-$100
12%

$101-$200
5%

Don't Know
3%

Nothing
2%

More than $200
2%

Less than $10
9%

$26-$50
26%

$11-$25
42%

Figure 19

How Users View the Cost of Online Services

Expensive
59%

Priced Correctly
22%

Inexpensive
3%

No Opinion
6%
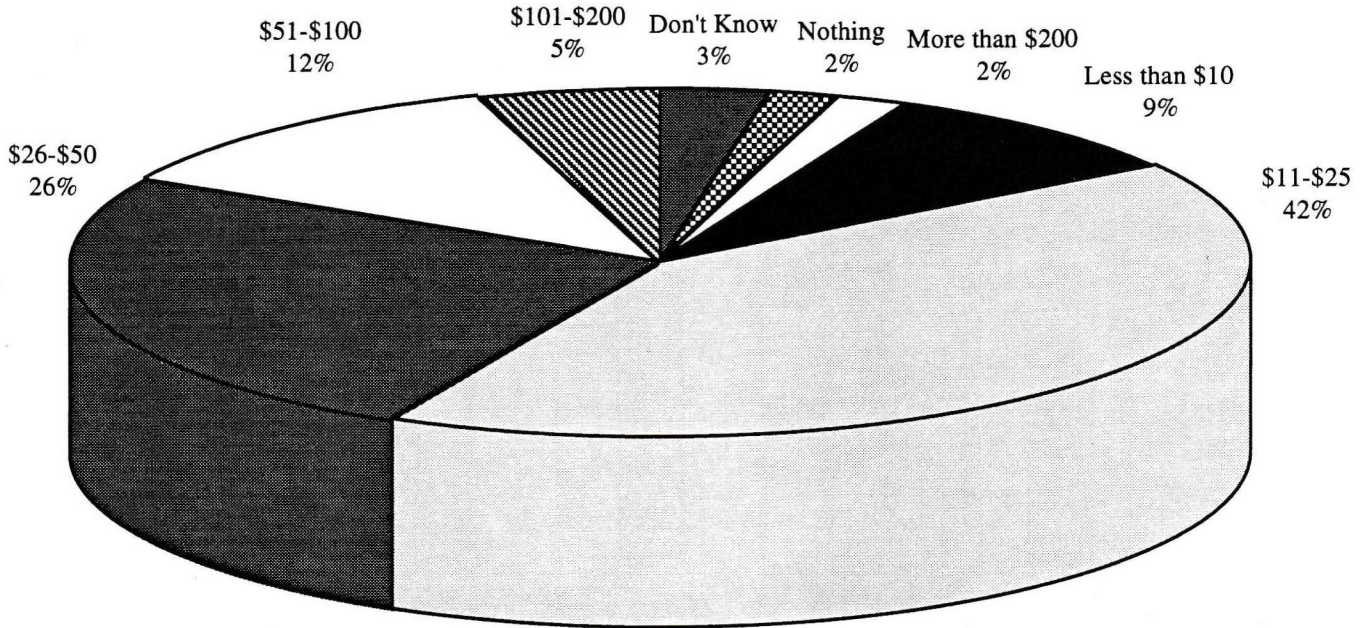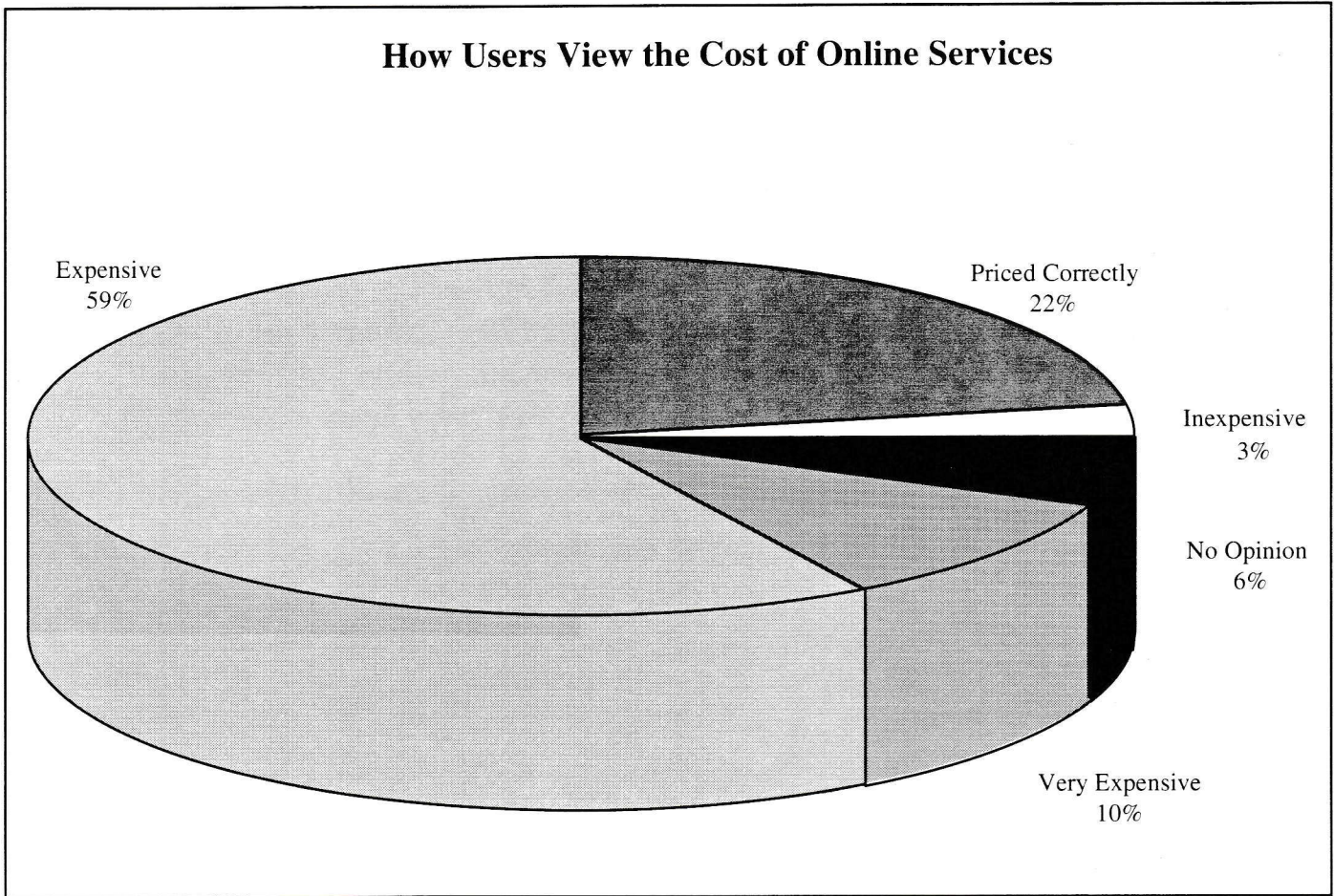
Very Expensive
10%

But if 69 per cent thought online services were expensive, the same percentage of respondents said they felt online services were easy or very easy to access and navigate (as can be seen in Figure 20). Nevertheless, about a quarter of respondents (23 per cent) felt the services were "difficult" to use and 2 per cent found them "very difficult." Eight per cent said they had no opinion.

Attitudes Toward Online Services: Support and Applications

Figure 21 documents consumer attitudes toward the level of support available online for hardware and software problems. A majority of respondents (51 per cent) felt that the support available to them was at least adequate, with 8 per cent describing it as "more than adequate." (Five per cent characterized it as "very inadequate" and 16 per cent as "inadequate.")

Applications seem to be even more well received (Figure 22). About 62 per cent of respondents felt that the current application mix is "adequate," while 14 per cent found it "more than adequate." (Three per cent said it was "very inadequate" and 16 per cent said it was "inadequate.")

Figure 20

How Users View the Ease of Accessing and Navigating Online Services

Easy to Use
59%

Very Easy to Use
10%

No Opinion
8%

Very Difficult
2%

Difficult
23%

Figure 21

Adequacy of Hardware and Software Support Available via Online Services

No Opinion
20%

Adequate
51%

Inadequate
16%

Very inadequate
5%

More than adequate
8%

Figure 22

Adequacy of the Range of Applications Available Online

No opinion
6%

Inadequate
16%

Adequate
62%

Very Inadequate
3%

More than adequate
14%
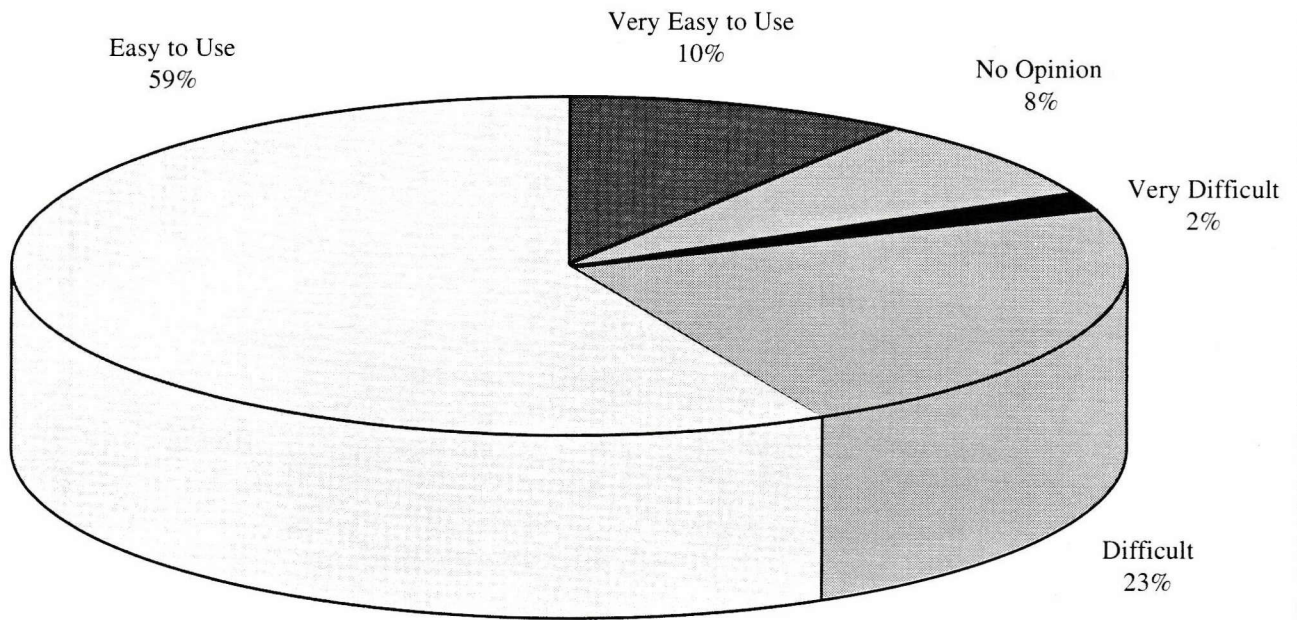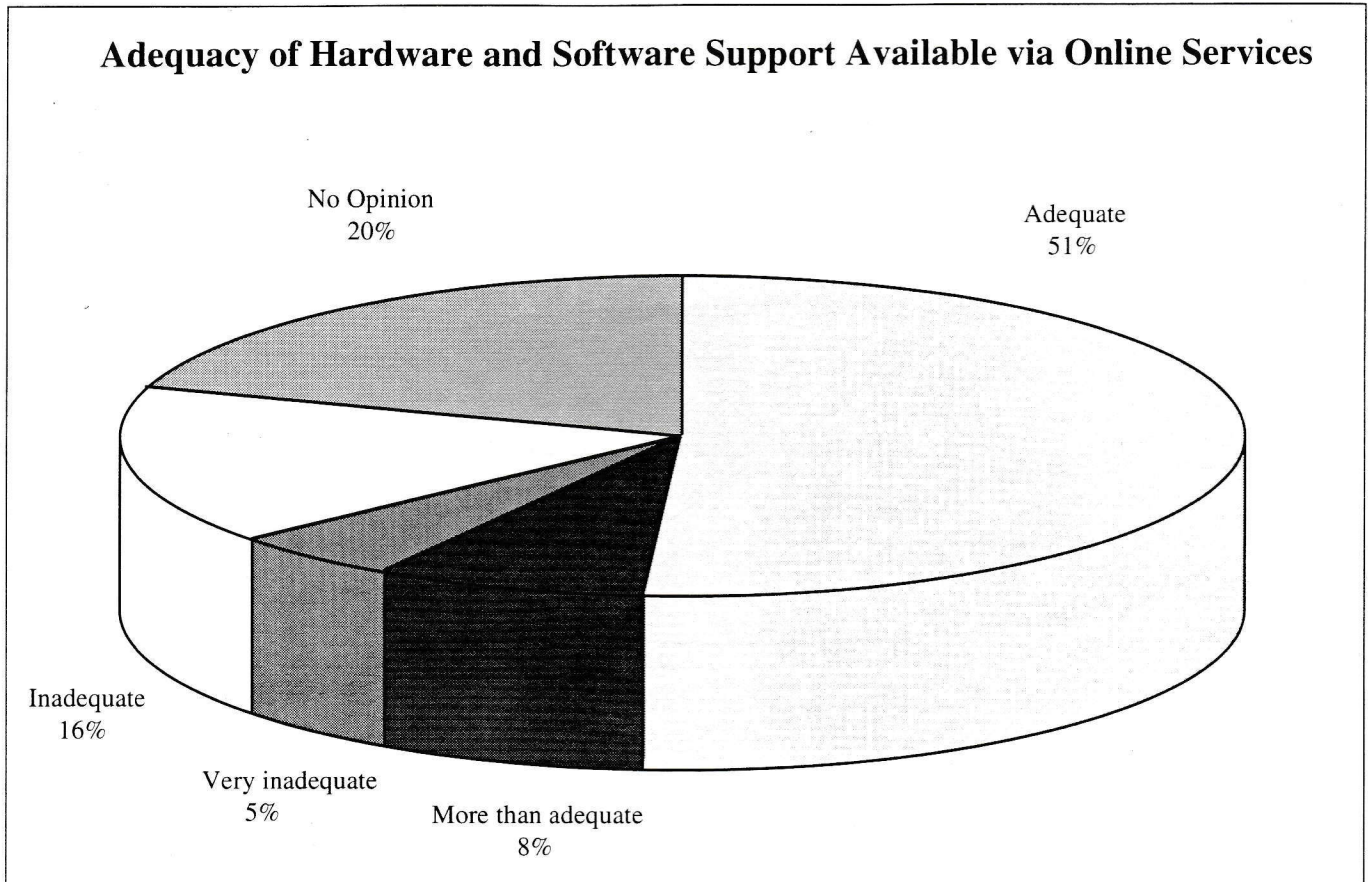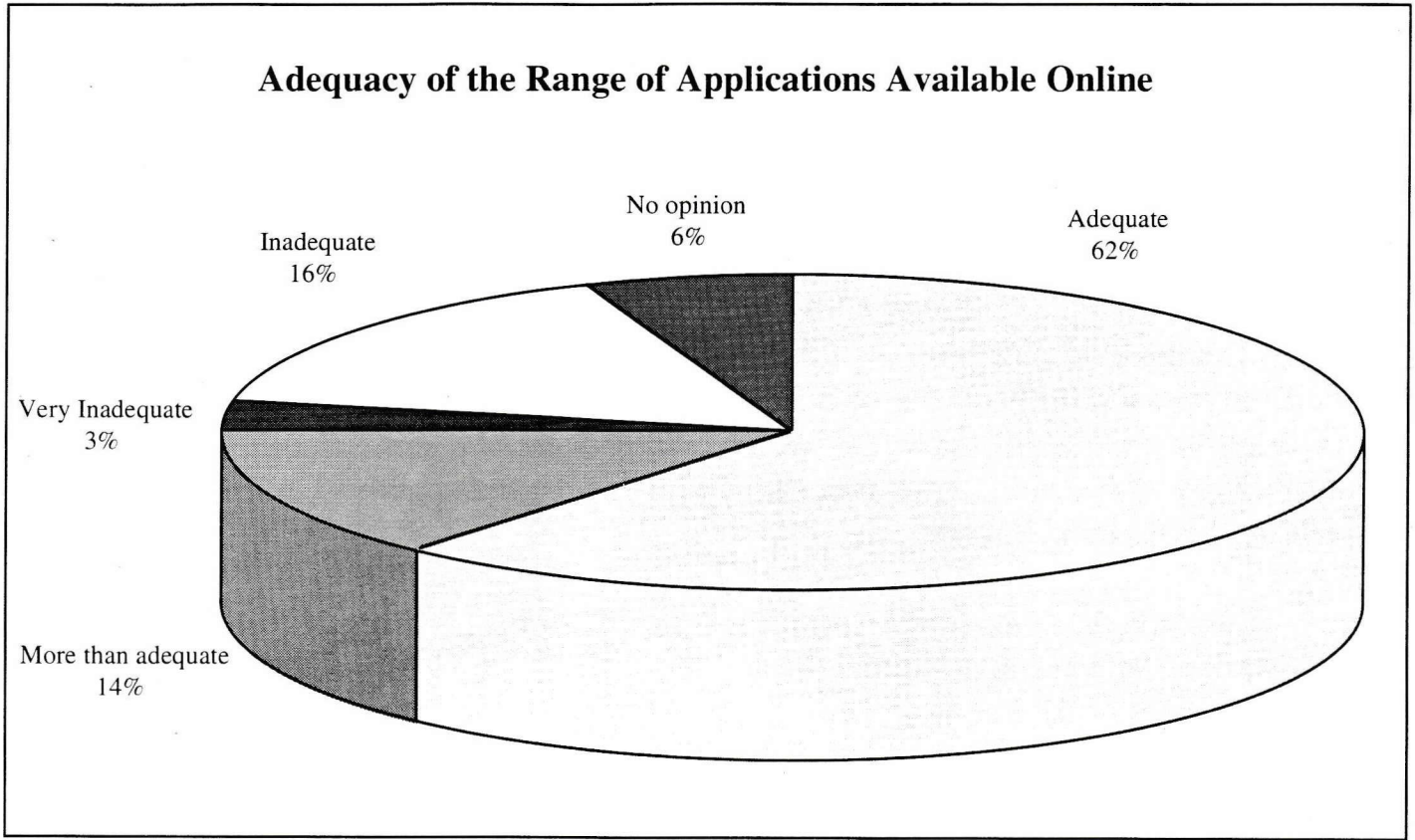
Internet Usage and Emerging Technologies

For the first time, the ISA's 1994 survey began to explore commercial online subscribers' use of the Internet, as well as their thoughts about other emerging platforms, including interactive television, screen telephones and personal digital assistants.

Internet Demographics

Overall, 44 per cent of respondents said they used the Internet (in spring of 1994), compared with 56 per cent who did not. Figures 23 and 24 examine some key demographic characteristics—age and income—of respondents who reported that they also used the Internet, compared with those that did not. What is clear from the data is that those commercial online subscribers who used the Internet in spring of 1994 were younger than those who did not. As indicated, 47 per cent of commercial service subscribers who reported that they used the Internet were under 35, compared to only 36 per cent of non-Internet users. Conversely, 64 per cent of commercial service subscribers who were not Internet users were over 35, compared with 53 per cent of those that also used the Internet.

Figure 24 furthers the comparison, in income terms. Surprisingly, income distribution is not polarized between non-Internet users and Internet users, belying the notion that the younger users of the Internet are less well-compensated. Rather, the data in 1994 suggests that Internet usage—at least by consumers who are also subscribers of established commercial online services—has grown to the point where it represents as well-heeled a user group as the traditional subscriber base in the online market.

Internet Access

Figure 25 shows the diverse ways in which online users access the Internet. Given that some of the major commercial services had only just begun to offer Internet access at the time the survey was conducted, it's interesting to note that 46 per cent of respondents who said they used the Internet accessed it through an online service. Also of note is the 17 per cent of respondents who indicated that they accessed the Internet via their company. Another 22 per cent said they accessed the Internet through a local online access company. It will be interesting to monitor what happens to these segments as the services incorporate full Internet access into their systems and pricing models for access through commercial online services and other Internet access providers evolve.

Figure 23

**Age of Consumer Online Subscribers
Who Also Use the Internet vs. Age
of Those Who Do Not**

Legend:
- ☐ Yes, use Internet
- ☐ No, don't use Internet

Age	Yes, use Internet	No, don't use Internet
Under 19	5%	5%
19-34 yrs	42%	31%
35-49 yrs	41%	47%
50-59 yrs	9%	11%
60 and over	3%	6%

Figure 24

Income Level of Consumer Online Subscribers Who Also Use the Internet vs. Income Level of Those Who Do Not

Note: Totals do not equal 100% due to those who chose not to answer.

Figure 25

Access to the Internet

Other
14%

Direct dial through local
provider
22%

Through a commercial
online service
46%

My company/ employer
provides access
17%

Internet Users: Favorite Applications

What do commercial online subscribers use when they access the Internet? Half of respondents who were using the Internet in spring of 1994 said they used USENET newsgroups, which are similar to the message boards of online services. Close behind were FTP (File Transfer Protocol) sites and databases, which 49 per cent of Internet users said they accessed. Forty-four per cent said they used gophers and/or the Wide Area Information Server (WAIS) to find information on the Net. Thirty-nine per cent said they used the Internet for e-mail, another 32 per cent said they used e-mail mailing lists and 23 per cent chose "other." Note that the survey was conducted before World Wide Web browsers began to be widely distributed (See Figure 26).

The biggest difference in usage between online subscribers who use the Internet and those who do not lies in the communications-intensive focus of the Internet user subset. As Figure 27 shows, the following are the applications that subscribers who use the Internet say they access the most on consumer online services:

1. Communicating with others who share similar interests and hobbies (50 per cent)
2. Downloading software (50 per cent)
3. Sending and receiving electronic messages with friends and family (49 per cent)

Online subscribers who are not Internet users, however, answered somewhat differently. These were the applications they reported using the most:

1. Obtaining Current News (50 per cent)
2. Downloading Software (41 per cent)
3. Getting Help on Hardware and Software/Communicating with others who share similar interests and hobbies (39 per cent each)

This comparison illustrates some additional differences between the two groups in 1994, as reflected in applications that could be considered more "mass market" in their orientation:

	Obtain Info/ Purchase Products	Educational Services for Children	Play Games	Obtain Financial Information
Internet User	7 per cent	13 per cent	10 per cent	22 per cent
Non-Internet User	13 per cent	15 per cent	14 per cent	27 per cent

Figure 26

Internet Features Used by Commercial Online Subscribers

Bar chart showing percentages:
- e-mail: 39%
- e-mail mailing lists: 32%
- WAIS, gopher: 44%
- USENET, news groups: 50%
- FTP Sites, databases: 49%
- other: 23%

Y-axis: 10%, 20%, 30%, 40%, 50%

Figure 27

**Most Frequently Used Applications by
Commercial Online Subscribers Who Also Use Internet vs.
Those Who Do Not**

| | Yes, use Internet | No, don't use Internet |

- Paying bills / transfer funds: 3% / 3%
- Obtain product info or purchase product: 13% / 7%
- Travel info/reservations: 8% / 7%
- Send/receive messages: 32% / 49%
- Downloading software: 41% / 50%
- Communicating w/others who share interests: 39% / 50%
- Educat'l services for children: 15% / 13%
- Obtaining current news: 50% / 40%
- Playing games: 14% / 10%
- Getting help (product support): 39% / 36%
- Obtaining financial info: 27% / 22%

10% 20% 30% 40% 50%

Consumers who use both commercial services and the Internet are clearly more apt to make use of communications-type forums, use online help less often, and—perhaps most significant—are less interested in such activities as browsing and shopping for goods, playing games, pursuing children's activities, or obtaining financial information. While the differences shown in these data are not overwhelmingly large, it is nevertheless informative to note the consistency of the differences in the two groups.

Attitudes Toward Available Applications

Figure 28 shows that both Internet and non-Internet users share about the same level of satisfaction with the mix of applications they can access on commercial online services. A slightly higher portion of Internet users (18 per cent to 14 per cent) consider the offerings to be inadequate.

Attitudes Toward Emerging Technologies

Figures 29 to 31 show the perceptions of commercial online subscribers toward three emerging technologies: screen phones, interactive television, and personal digital assistants. The table below summarizes the three top applications that online users associated with each:

	Screen Phone	ITV	PDA
Top Applications	• Send and Receive E-mail • Obtain information and lists • White- and Yellow-Page listings	• Obtain Movies on Demand • (3-Way Tie) Educational Services for Children Obtain Current News E-mail	• Send and Receive E-mail • Obtain Current News • (Tie) Obtain local listings Obtain Financial Information

While online subscribers are not necessarily the target market for these devices, their ranks presumably include the kinds of "early adopters" who are usually the first to try out new information technologies such as these.

More respondents said they would be interested in using interactive television than would be interested in using a screen phone (75 per cent compared with 61 per cent). However, in the case of PDAs, which had already gone beyond the realm of "what-if" and into the marketplace nationwide, only 4 per cent of survey respondents reported they owned one and another 9 per cent said they planned to own one during the next 12 months. Eighty-six per cent said they had no plans to acquire one during the next 12 months.

Figure 28

Perception of the Range of Applications Available Online
(e.g., news, messaging and chat, financial services, games)

Legend:
- Yes, use Internet
- No, don't use Internet

	Very inadequate	Inadequate	No opinion	Adequate	More than adequate
Yes, use Internet	3%	18%	5%	61%	12%
No, don't use Internet	4%	14%	6%	62%	14%

Figure 29

SCREEN PHONES: Most Important Applications
in Decision to Begin Using
(Multiple responses allowed)

Application	Percentage
Obtain local info/lists	27%
White/yellow page lists	25%
Opinion polls	6%
Pay bills/transfer funds	22%
Obtain information or purchase products	17%
Travel info/reservations	8%
Send/receive e-mail	60%
Play-along sports events	6%
Obtain missed TV shows	8%
Educational services for children	21%
Obtain current news	23%
Play games	11%
Obtain movies on demand	19%
Obtain financial info	17%

10%   20%   30%   40%   50%   60%

Figure 30

INTERACTIVE TV: Most Important Applications
in Decision to Begin Using
(Multiple responses allowed)

Application	Percentage
Obtain local info/lists	22%
White/yellow-page lists	7%
Opinion polls	9%
Pay bills/transfer funds	10%
Obtain information or purchase products	16%
Travel info/reservations	5%
Send/receive e-mail	27%
Play-along sports events	11%
Obtain missed TV shows	25%
Educational services for children	27%
Obtain current news	27%
Play games	24%
Obtain movies on demand	66%
Obtain financial info	15%

Figure 29

SCREEN PHONES: Most Important Applications
in Decision to Begin Using
(Multiple responses allowed)

Application	Percentage
Obtain local info/lists	27%
White/yellow page lists	25%
Opinion polls	6%
Pay bills/transfer funds	22%
Obtain information or purchase products	17%
Travel info/reservations	8%
Send/receive e-mail	60%
Play-along sports events	6%
Obtain missed TV shows	8%
Educational services for children	21%
Obtain current news	23%
Play games	11%
Obtain movies on demand	19%
Obtain financial info	17%

10% 20% 30% 40% 50% 60%

Figure 31

PERSONAL DIGITAL ASSISTANTS:
Most Important Applications
in Decision to Begin Using
(Multiple responses allowed)

Application	Percentage
Obtain local info/lists	25%
White/yellow page lists	16%
Opinion polls	5%
Pay bills/transfer funds	19%
Obtain information or purchase products	8%
Travel info/reservations	12%
Send/receive e-mail	61%
Play-along sports events	5%
Obtain missed TV shows	6%
Educational services for kids	20%
Obtain current news	33%
Play games	13%
Obtain movies on demand	19%
Obtain financial info	25%

10% 20% 30% 40% 50% 60% 70%

Qualitative Issues Raised in the 1994 Survey

At the end of the survey, respondents were given the opportunity to type in additional comments on pricing, ease of use, hardware/software support, and anything else that concerned them. The following is a listing of the most significant issues raised in this section.

Cost

Among this survey's respondents, pricing issues drew the most intense comments. Users on each of the services displayed a growing impatience with pricing arrangements that combine user connect charges with monthly fees. These sentiments were also expressed in the 1993 ISA survey.

Here's a sample:

"Once the 'free' time is past on all services, the time accumulates too fast for too much."

"I find it difficult to use when I am charged a fee for so many hours, then charged more if I go over that. It is hard to know when you are close to going over."

"I would like to suggest a plan which is less time driven and let the users who want all those special features pay through the ear."

"I often find myself rationing my time and sometimes not coming online at all so as not to run up my bill."

"For customers in rural areas, long distance calls keep most of us offline simply because of toll rates. I think it's unfair."

"I am generally quite satisfied with the online services that I use, however most are rather expensive. I would be able to get more out of such services if they were more reasonably priced."

"Need to lower the cost dramatically to see exponential growth. People are afraid enough of the technology but price will definitely hold back people on the fence."

"I would like to see something like CATV where a broker/provider could offer a menu of services from a variety of vendors."

"I think if the online services would go to a flat monthly fee, it would be more appealing to the majority of people."

"The cheaper online services become, the more I will use them."

Communications

Communications remain a critical aspect of the online services marketplace, with responses to many of the survey's open-ended questions describing the value placed on bulletin boards, in-system e-mail and Internet launch and access.

A sample of typical comments:

"I believe the best communication service to be Internet. The Internet I currently use is provided by my company. . . . The Internet is the closest thing going that represents the 'Information Superhighway.' "

"Would you please send me some information on The Information Highway. And when we can expect all these new technological advances. . . ."

"Get full Internet access soon or I'm going elsewhere."

"Electronic mail is the most valuable service to me—I have a hard time writing and a keyboard allows me to express myself freely. Almost as valuable is the ability to reach people with similar interests to mine. It works against personal isolation and expands my community."

"Services should always include Bulletin Board interaction between members even though much of personal usage may be business type in nature. This is to provide a work and entertainment mix which helps when one spends a lot of time in front of a screen."

PC, Not TV

An interesting minority is also emerging: consumers who view interactive applications—communications and access to certain online information—as their preferred new media platform, instead of the TV-centric model for interactive media. Multi-channel interactive television offerings were, in several instances, derided for their shopping and pay-per-view content fare.

Here is a sample of these comments:

"The only interactive TV that I would be interested in would be movies by demand. I think the 'computer' works just fine for everything else."

"About the question on interactive television, I answered that I would subscribe to it, but I am a little apprehensive towards it. . . . Even the primitive form of home shopping is eroding the community structure by keeping me even more isolated from other people in a world becoming increasingly isolated."

"Most high-tech products such as interactive TV are capability-pushed onto marketplace, rather than demand-pulled. All of them as currently conceived appear to be much more costly than most will accept. . . ."

"Tell me what ITV can do that I can't do now, or how it will do it better, and if it's something I WANT to do, I'll reconsider my opinion."

"On the ITV question, the day someone tells me what it will do for me that the online services can't and won't do for me, I'll consider it; until then, I'm not interested."

Miscellany

Technology is also a growing source of frustration for many users. Whether represented by slow modem speeds, lack of port capacity, or poor-quality connections, a sense of disappointment associated with the performance level of the services was cited in many comments.

In a small but related sentiment, there was a grasping for more advanced features apparent in some comments. Increasingly, users are aware of better or improved interface design or graphics quality than is available to them via their particular online service.

Many of the comments were directed specifically to the service used by the respondent. Comments collected on each of the services have been forwarded to those companies.

APPENDIX

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

			1991	1993	1994
A)	**How long have you been using online services?**				
	1)	Less than 1 year	29%	37%	42%
	2)	1-3 years	37%	31%	33%
	3)	4 or more years	34%	33%	25%
B)	**How frequently do you or other household members use online services?**				
	1)	At least once a day	22%	31%	54%
	2)	Very frequently (3-4 times per week)	39%	41%	32%
	3)	Somewhat frequently (once a week) or Occasionally (once or twice a month)	33%	18%	13%
	4)	Less frequently than once a month	5%	14%	1%
C)	**What percentage of your online use is for business and personal use?**				
	1)	100% Business			2%
	2)	100% Personal			42%
	3)	Equal Usage (50% Business, 50% Personal)		16%	15%
	4)	Shared Usage (More than 50% Business)		11%	8%
	5)	Shared Usage (More than 50% personal)		65%	31%
	6)	Don't know			1%
D)	**Who is paying your online services fees?**				
	1)	You pay personally		86%	89%
	2)	Your employer pays all fees		5%	4%
	3)	You pay some and your employer pays some of the fees		8%	6%
	4)	Don't know			1%
D1)	**What is the size of your company? (follow-on to those who chose Answer D2 and D3)**				
	1)	More than 50 employees		46%	51%
	2)	Less than 50 employees		25%	28%
	3)	Self employed		29%	21%

Appendix 1

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

			1991	1993	1994
E)	**How many online services do you currently subscribe to or use from home?**				
	1)	One (this one)	31%	38%	51%
	2)	Two (total - this one and another one)		28%	30%
	3)	Three (total - this one and two others)		18%	12%
	4)	Four (total - this one and three others)		7%	3%
	5)	Five or more (total - this one and at least four others)		9%	4%
	6)	Don't know			1%
		(1993 results derived from two questions in last survey)			
F)	**Do you intend to use any additional online services during the next 12 months, aside from the ones currently utilized?**				
	1)	Yes	43%	44%	31%
	2)	No	55%	51%	35%
	3)	Don't know or didn't answer*		5%	34%
		(*in previous surveys, "don't know" was not given as a choice)			
G)	**Which one of the following best describe your reasons for using more than one online service? (Choose all that apply)**				
	1)	No one service provides all the features I want to see	63%	64%	36%
	2)	The cost of some of the features is cheaper on other services	45%	52%	49%
	3)	Some services are easier, or more fun to use, than others	45%	51%	40%
H)	**Do you use bulletin boards (BBSes) in addition to commercial services such as the one you are using now? Bulletin boards are defined as online services that are usually free to the user and are local.**				
	1)	Yes		66%	67%
	2)	No		32%	33%
I)	**Which of the following reasons best describe why you're using bulletin boards? Choose all that apply. (follow-on to Answer H1)**				
	1)	Because they are free		41%	28%
	2)	Because they provide shareware and freeware		37%	64%
	3)	To communicate with the other users on the board		34%	56%
	4)	Because the board covers my work or is provide by my employer		21%	16%

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

			1991	1993	1994
J)	**Do you use the Internet?**				
	1)	Yes			44%
	2)	No			56%
K)	**How do you access the Internet? (follow-on to Answer J1)**				
	1)	Direct dial through local provider			22%
	2)	My company/employer provides access			17%
	3)	Through a commercial online service			46%
	4)	other			14%
L)	**What Internet features do you use? (follow-on to Answer J1) (pick all that apply)**				
	1)	email			39%
	2)	email mailing lists			32%
	3)	WAIS, gopher			44%
	4)	USENET, news groups			50%
	5)	FTP Sites, databases			49%
	6)	other			23%
M)	**Please choose the three online applications you use the most.**				
	1)	Obtaining current financial information (managing investments)	30%	22%	25%
	2)	Getting help and other information on using your PC and software (product support)	68%	39%	38%
	3)	Playing games	23%	14%	12%
	4)	Obtaining current general news	42%	33%	46%
	5)	Using educational services for my children	23%	11%	14%
	6)	Communicating with others who share similar interests and hobbies	47%	46%	44%
	7)	Downloading software	80%	52%	45%
	8)	Sending and receiving electronic messages with friends and family	51%	37%	39%
	9)	Obtaining travel information and making reservations	22%	20%	8%
	10)	Obtaining product information and purchasing products	15%	21%	10%
	11)	Paying bills, checking balance, and transferring funds between accounts	N.A.	N.A.	3%
	12)	Don't know	N.A.	N.A.	3%

Appendix 3

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

		1991	1993	1994
N)	**Please choose the three online applications which were most important in your decision to begin using an online service.**			
1)	Obtaining current financial information (managing investments)	19%	N.A.	21%
2)	Getting help and other information on using your PC and software (product support)	57%	N.A.	36%
3)	Playing games	24%	N.A.	12%
4)	Obtaining current general news	24%	N.A.	39%
5)	Using educational services for my children	18%	N.A.	18%
6)	Communicating with others who share similar interests and hobbies	29%	N.A.	44%
7)	Downloading software	71%	N.A.	45%
8)	Sending and receiving electronic messages with friends and family	38%	N.A.	38%
9)	Obtaining travel information and making reservations	14%	N.A.	8%
10)	Obtaining product information and purchasing products	8%	N.A.	10%
11)	Paying bills, checking balance, and transferring funds between accounts	N.A.	N.A.	3%
12)	Don't know	N.A.	N.A.	6%
O)	**Do other members of your family use online services regularly, that is at least a few times a month?**			
1)	Yes	24%	42%	41%
2)	No	76%	57%	59%
P)	**What family members use online services? (follow-on toAnswer O1)**			
1)	Male head of household			12%
2)	Female head of household			62%
3)	Children age 12 and under	10%	21%	19%
4)	Children over 12 years of age	27%	19%	39%
5)	Uncertain/don't know			4%
6)	Refused			0%
	(* in previous surveys, "spouse" was offered as a choice)			
Q)	**Who is the primary (heaviest) user of online services in your household? (pick one)**			
1)	Male head of household			78%
2)	Female head of household			13%
3)	Children age 12 and under			0.3%
4)	Children over 12 years of age			8%

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

		1991	1993	1994

R) In a typical month, how much would you estimate is spent by your household on online communications including both subscription costs and usage charges?

		1994
1)	Nothing	2%
2)	Less than $10	9%
3)	$11-25	42%
4)	$26-50	26%
5)	$51-100	12%
6)	$101-200	5%
7)	More than $200	2%
8)	Don't know	3%

S) Interactive television is being developed for consumer use. If available where you live, would you be interested in having it in your home?

		1994
1)	Yes	75%
2)	No	25%

S1) Please choose the three applications which are likely to be most important in your decision to begin using interactive television. (follow-on to Answer S1)

		1994
1)	Obtaining current financial information	15%
2)	Obtaining movies on demand	66%
3)	Playing games or play along game shows	24%
4)	Obtaining current general news	27%
5)	Using educational services for my children	27%
6)	Obtaining recent television shows that you missed	25%
7)	Play-along sports events	11%
8)	Sending and receiving electronic messages with friends and family	27%
9)	Obtaining travel information and making reservations	5%
10)	Shopping that includes product information and purchasing of products	16%
11)	Paying bills, checking balance, and transferring funds between accounts	10%
12)	Opinion polling	9%
13)	Getting white and yellow page directory listings	7%
14)	Obtaining local information, restaurant reviews, directions, movie listings	22%

Appendix 5

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

	1991	1993	1994

T) **During 1993, several different personal assistants or personal digital assistants were being sold for the first time by such companies as Apple, Casio and AT&T. What is your current interest in personal assistants?**

		1994
1)	I own one	4%
2)	I am planning to own one within the next 12 months	9%
3)	I am not planning to own one during the next 12 months	86%

T1) **Please choose the three applications which are likely to be most important in your decision to begin using a personal assistant (PA)? (follow-on to Answer T1)**

		1994
1)	Obtaining current financial information	25%
2)	Obtaining movies on demand	19%
3)	Playing games or play along game shows	13%
4)	Obtaining current general news	33%
5)	Using educational services for my children	20%
6)	Obtaining recent television shows that you missed	6%
7)	Play-along sports events	5%
8)	Sending and receiving electronic messages with friends and family	61%
9)	Obtaining travel information and making reservations	12%
10)	Shopping that includes product information and purchasing of products	8%
11)	Paying bills, checking balance, and transferring funds between accounts	19%
12)	Opinion polling	5%
13)	Getting white and yellow page directory listings	16%
14)	Obtaining local information, restaurant reviews, directions, movie listings	25%

U) **Telephone with a screen, also called screen phones, are being developed. If available to you, would you be interested in using such a device?**

		1994
1)	Yes	61%
2)	No	40%

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

		1991	1993	1994

U1) **Please choose the three applications which are likely to be most important in your decision to begin using a screen phone?**
(follow-on to Answer U1)

		1994
1)	Obtaining current financial information	17%
2)	Obtaining movies on demand	19%
3)	Playing games or play along game shows	11%
4)	Obtaining current general news	23%
5)	Using educational services for my children	21%
6)	Obtaining recent television shows that you missed	8%
7)	Play-along sports events	6%
8)	Sending and receiving electronic messages with friends and family	60%
9)	Obtaining travel information and making reservations	8%
10)	Shopping that includes product information and purchasing of products	17%
11)	Paying bills, checking balance, and transferring funds between accounts	22%
12)	Opinion polling	6%
13)	Getting white and yellow page directory listings	25%
14)	Obtaining local information, restaurant reviews, directions, movie listings	27%

W) **Are online services...**

		1994
1)	Very expensive	10%
2)	Expensive	59%
3)	No opinion	6%
4)	Priced correctly	22%
5)	Inexpensive	3%

Y) **In terms of accessing and navigating online services, are they...**

		1994
1)	Very difficult	2%
2)	Difficult	23%
3)	No opinion	8%
4)	Easy to use	59%
5)	Very easy to use	10%

Appendix 7

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

	1991	1993	1994

AA) Is PC hardware and software support on online services...

		1994
1)	Very inadequate	5%
2)	Inadequate	16%
3)	No opinion	20%
4)	Adequate	51%
5)	More than adequate	8%

CC) Are the range of applications available online (e.g. news, messaging and chat, financial services, games)...

		1994
1)	Very inadequate	3%
2)	Inadequate	16%
3)	No opinion	6%
4)	Adequate	62%
5)	More than adequate	14%

GG) What is your sex?

		1994
1)	Male	83%
2)	Female	16%

HH) Which of the following best describes the highest education level of the primary wage earner/income provider of the household?

		1994
1)	Not a high school graduate	2%
2)	High school graduate	7%
3)	Some College	3%
4)	College graduate	26%
5)	Some post-graduate work	28%
6)	Post graduate degree	12%
7)	Vocational/Trade school	21%
8)	Don't know/refused	2%

1994 Consumer Online Survey Questions and Results

(Note: Qualitative responses not included; some totals do not equal 100% due to rounding or multiple responses allowed)

		1991	1993	1994

II) Which of the following best reflects your household's overall annual income (before taxed)?

		1994
1)	Under $15,000	4%
2)	Over $15,000 but less than $20,000	3%
3)	More than $20,000 but less than $25,000	5%
4)	More than $25,000 but less than $30,000	6%
5)	More than $30,000 but less than $35,000	8%
6)	More than $35,000 but less than $40,000	7%
7)	More than $40,000 but less than $45,000	14%
8)	More than $45,000 but less than $50,000	5%
9)	More than $50,000 but less than $60,000	9%
10)	More than $60,000 but less than $75,000	9%
11)	More than $75,000 but less than $100,00	9%
12)	$100,000 or more	9%
13)	Don't know	12%

JJ) Please indicate your age.

		1994
1)	Under 12	0.4%
2)	12-18	4%
3)	19-24	8%
4)	25-29	13%
5)	30-34	15%
6)	35-39	16%
7)	40-44	16%
8)	45-49	12%
9)	50-54	7%
10)	55-59	3%
11)	60-64	2%
12)	65 and over	2%

1991 figures were published in the ISA's 1992 Survey Report, based on surveys that were mounted on the systems of four ISA member companies and distributed to the advisory committees of two others.
1993 figures were collected in December 1992-January 1993 from surveys from 10 national and regional services and published in the ISA's 1993 Survey Report.